

947.1	Timber Test Pile	Each
948.1	Short Duration Load Test	Each
948.2	Maintained Load Test	Each
948.3	Quick Load Test	Each
948.4	Dynamic Load Test Preparation	Each
948.41	Dynamic Load Test by Contractor	Each
948.5	Pile Shoes	Each
999.940	Untreated Timber Pile Cut-off	Meter
999.941	Treated Timber Pile Cut-off	Meter

\*Designation by size and mass.

## SECTION 950

### SHEETING

#### DESCRIPTION

##### 950.20 General.

This work shall consist of furnishing and placing lumber, wood or steel sheeting of the kinds and dimensions required, complying with these specifications, where indicated on the plans or where directed. All dimensions specified for lumber are nominal dimensions.

#### MATERIALS

##### 950.40 General.

Materials shall meet the requirements specified in the following Subsections of Division III. Materials:

Lumber Sheeting	M9.05.0
Wood Sheeting	M9.05.0
Steel Sheeting	M8.05.4

#### CONSTRUCTION METHODS

##### 950.60 General.

Work shall not be started until all materials and equipment necessary for their construction are either on the site of the work or satisfactorily available for immediate use as required. Sufficient labor and equipment shall be employed to insure the completion of the excavation, placing of the concrete and backfilling in the shortest possible time.

Where no other direction is given, sheeting shall be driven to such depth that the footing may be lowered at least 500 millimeters below the elevation shown on the plans without any change in the sheeting as driven.

Sheeting that is to be paid as sheeting left in place shall be driven to a minimum depth of 1.5 meters below the proposed bottom of the concrete footings unless otherwise directed. After sufficient progress has been made on the construction the sheeting shall be cut off at the tops of the footings or as otherwise directed.

##### 950.61 Placing of Sheeting.

The sheeting shall be securely and satisfactorily braced to withstand all pressures to which it may be subjected and be sufficiently tight to prevent any flow of water or material into the space in which concrete is deposited. The bottom

edge of each piece of lumber and wood sheeting shall be so sharpened as to lead the toe of the sheeting away from the excavation. Jetting may be done only with the approval of the Engineer, but it will not be permitted when excess of water may endanger railroad tracks or other structures.

Where sheeting is to be used as a form for placing concrete the sheeting shall be driven entirely outside the neat lines shown on the plans for the concrete.

When, in the Engineer's judgment, the foundation must be altered to such an extent that changes must be made in the depths to which sheeting has been driven, or the area enclosed by the sheeting must be changed, the Contractor shall make the directed changes in accordance with the provisions of Subsection 9.03, Payment for Extra Work.

#### **950.62      Cut-Off.**

The sheeting shall be driven down or cut off to the elevation shown on the plans or directed by the Engineer. No sheeting may be left so as to create a possible hazard to navigation of a stream, safety of the public, obstruction to flow of water, or a hindrance to traffic of any kind.

#### **950.63      Care Near Railroads.**

When sheeting is driven adjacent to railroad tracks, the Contractor shall keep on the work site, quickly available for use, such equipment and operators needed to immediately burn or cut off any sheeting that cannot be driven into the clear before the arrival of trains.

#### **950.64      Disposal of Cut-off and Waste Materials.**

No cut-off shall be allowed to float away in a stream or left in such a manner as to obstruct the flow of water.

All cut-off will become the property of the Contractor and shall be removed by him/her from the site.

At the option of the Contractor, steel sheeting cut-offs may be used as sheet piling or parts of sheet piling. If welding is used, such welds shall be full butt-welds designed to develop the full strength of the sheet pile, both in bearing and bending, and shall conform with any of the prequalified joints shown in the AASHTO/AWS Bridge Welding Code (ANSI/AASHTO/AWS D1.5).

#### **950.65      Defective Work.**

The responsibility for the exact satisfactory construction and maintenance of sheeting complete in place shall rest with the Contractor and any work done which in the performance of incidental construction is not acceptable for the intended purpose shall be either repaired or removed and reconstructed by the Contractor at his/her expense.

## **COMPENSATION**

#### **950.80      Method of Measurement.**

The items of Lumber Sheeting, Wood Sheeting, or Steel Sheeting will be a pay item only if indicated on the plans or in the Special provisions to be left in place or when ordered left in place by the Engineer as a permanent part of the foundation. Otherwise the Contractor may remove the sheeting or abandon it at his/her option, provided that sheeting may be abandoned only to the extent permitted by the Engineer.

Lumber or Wood Sheeting, when indicated on the plans or in the Special Provisions to be left in place or when ordered by the Engineer to be left in place as a permanent part of the foundation, will be measured by the cubic meter of

lumber or wood sheeting. The quantity to be paid for will be the area of sheeting left in place multiplied by the nominal thickness.

Steel sheeting, when indicated on the plans or in the Special Provisions to be left in place or when ordered by the Engineer to be left in place as a permanent part of the foundation, will be measured by the kilogram. The mass of the quantity to be paid for shall be calculated on the basis of 107 kilograms per square meter of wall in place. No additional compensation will be allowed if a heavier sheeting is used unless such heavier sheeting is specified in the Special Provisions, or shown on the plans.

**950.81 Basis of Payment.**

Steel sheeting, when indicated on the plans, in the Special Provisions, or when ordered by the Engineer, to be left in place as a permanent part of the foundation, will be paid for at the contract unit price per kilogram under the item for Steel Sheeting. The contract unit price per kilogram shall also include full compensation for anchors, when required, for the sheeting.

Lumber or Wood when indicated on the plans or in the Special Provisions to be left in place or when ordered by the Engineer in writing to be left in place as a permanent part of the foundation will be paid for at the contract unit price per cubic meter for Lumber Sheeting or Wood Sheeting.

No direct payment will be made for any sheeting not indicated on the plans or in the Special Provisions or not ordered in writing by the Engineer to be left in place as a permanent part of the foundation. Such sheeting will be considered as incidental work necessary for the proper prosecution and protection of the work during construction operations and compensation therefor shall be included in the prices bid for the various items of work for which the sheeting was used. If the Contractor elects to leave such sheeting in place with the approval of the Engineer, no payment will be made for same as sheeting left in place.

For purposes of partial payment, except as noted below, the sheeting item will be considered 90 percent done when the sheeting has been completely driven and the area within the sheeting is ready for such work as may be required to be done therein. The sheeting item will be considered completed when the sheeting has been cut at the required elevation.

**950.82 Payment Items.**

950.	Lumber Sheeting	Cubic Meter
951.	Wood Sheeting	Cubic Meter
952.	Steel Sheeting	Kilogram

**SECTION 955**

**TREATED TIMBER**

**DESCRIPTION**

**955.20 General.**